



## BEST AVAILABLE COPY

PATENT  
0247D-5385

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Hiroyuki Kinoshita et al.

Serial No: 08/808,315

Filed: February 27, 1997

For: Sapphire Monocrystal, Semiconductor  
Laser Diode Using the Same for  
Substrate, and Method for  
Manufacturing the Same

Art Unit: 2812

Examiner: Yoni Y. Chang

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:  
Assistant Commissioner for Patents  
Washington D.C. 20231, on  
19 March 1999  
Date of Deposit

William H. Wright

Name

Signature

03/19/1999  
Date

### REQUEST FOR CORRECTED FILING RECEIPT

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sirs:

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APR 14 1999

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Attached is a copy of the official Filing Receipt (Exhibit 1) received from the PTO in the above application, for which issuance of a corrected filing receipt is respectfully requested.

There is an error in the Filing Receipt in that the filing date is incorrectly entered. The Filing Receipt date should read "02/27/97" rather than "02/28/97".

As evidenced by the customer copy of the express mail slip (Exhibit 2), the application was deposited with the U.S. Postal Service on February 27, 1997 ("FEB 27 1999"). The transmittal for this application (Exhibit 3) indicates the express mail label number (EM377155497US) and February 27, 1997 date. Further, the first page of the application (Exhibit 4) reflects the same express mail label number.

Accordingly, it is respectfully requested that the above application be accorded its proper filing date of February 27, 1997.

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Since the correction is not due to any error by applicant, no fee is required.

Respectfully submitted,

LOEB & LOEB LLP

Date: 18 March 1999

By: 

\_\_\_\_\_  
William H. Wright  
Registration No. 36,312  
Attorney for Applicant(s)

10100 Santa Monica Blvd., 22nd Floor  
Los Angeles, California 90067-4164  
Telephone: 310-282-2000  
Facsimile: 310-282-2192

**FILING RECEIPT**  
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PD-5385  
UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
KYOCELA  
AL

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTORNEY DOCKET NO.	DRWGS	TOT CL	IND CL
08/808,315	02/28/97	1109	\$770.00	247/PD-5385	6	16	7

LOEB & LOEB  
10100 SANTA MONICA BOULEVARD  
22ND FLOOR  
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**JUN 20 1997**

**DOCKETING**

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Application Processing Division's Customer Correction Branch within 10 days of receipt. Please provide a copy of the Filing Receipt with the changes noted thereon.

**Applicant(s)**

HIROYUKI KINOSHITA, GAMO-GUN, JAPAN; MOTOHIRO UMEHARA,  
GAMO-GUN, JAPAN.

FOREIGN/PCT APPLICATIONS-JAPAN  
JAPAN

8-43862  
8-43863

02/29/96  
02/29/96

**TITLE**

SAPPHIRE MONOCRYSTAL, SEMICONDUCTOR LASER DIODE USING THE SAME FOR  
SUBSTRATE, AND METHOD FOR MANUFACTURING THE SAME

**PRELIMINARY CLASS: 117**

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**JUN 20 1997**

BY

*[Signature]*

**EXHIBIT 1**

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EM377155497US



ORIGIN (POSTAL USE ONLY)

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FROM NAME: PHONE: 310 282 2000

LOEB & LOEB LLP  
10100 SANTA MONICA BLVD #2200  
LOS ANGELES CA 90067-4164  
EMILY MEDEROS PATENT DEPT.  
Kyocera 247D/5385

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Washington, D.C.220231

ASSISTANT COMMISSIONER OF PATENTS  
Washington, D.C. 20231



Exp. Mail No. EM 377 155 497

Dear Sir:

Transmitted herewith for filing is the patent application of

**BEST AVAILABLE COPY**

Inventor(s): HIROYUKI KINOSHITA; MOTOHIRO UMEHARA

For: **SAPPHIRE MONOCRYSTAL, SEMICONDUCTOR LASER DIODE USING THE SAME FOR SUBSTRATE, AND METHOD FOR MANUFACTURING THE SAME**

Enclosed are:

- ☒ Sheet(s) of drawing (6 formal \_ informal) + 0 extra copies
- ☒ An assignment of the invention to KYOCERA CORPORATION. \_ Will follow.
- ☒ A certified copy of Jap. Pat. Appl. 8-43862 filed 2/29/96; 8-43863 filed 2/29/96 from which priority is claimed in the subject case pursuant to Rule 55(b) and 35 USC 119. ☒ Will follow.
- \_ An associate power of attorney.
- \_ A verified statement to establish small entity status under 37 CFR 1.9 and 1.27.
- ☒ Declaration and Power of Attorney. \_ Will Follow.
- \_ Information Disclosure Statement.
- \_ Preliminary Amendment.

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APR 1 4 1997

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CALCULATION OF FEES				
ITEM	NUMBER OF CLAIMS FILED MINUS BASE*	NUMBER OF CLAIMS OVER BASE x RATE	\$ AMOUNT	\$ FEE
A TOTAL CLAIMS FEE	16 - 20* =	0 x \$11.00 or \$22.00	\$	
B INDEPENDENT CLAIMS FEE**	7 - 3* =	4 x \$40.00 or \$80.00	\$320.00	
C BASIC FEE			SMALL ENTITY FEE = \$385.00 LARGE ENTITY FEE = \$770.00	\$770.00
D MULTIPLE-DEPENDENT CLAIMS FEE			SMALL ENTITY FEE = \$130.00 LARGE ENTITY FEE = \$260.00	\$
E TOTAL FEE				\$1,090.00

- \_ Please charge my Deposit Account No. the amount of \$\_\_\_\_\_. A copy of this letter is enclosed.
- ☒ A check in the amount of \$1,090.00 to cover the filing fee is enclosed. A copy of this letter is enclosed.
- ☒ Check for \$40.00 covering Recordation of Assignment fee enclosed. A copy of this letter is enclosed.
- ☒ The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 12-1820. A duplicate copy of this sheet is enclosed.
- ☒ Any additional filing fees required under 37 CFR 1.16.
- \_ Any patent application processing fees under 37 CFR 1.17.

Respectfully submitted,

*Roger R. Wise*  
Roger R. Wise  
Registration No. 31,204

Date: February 27, 1997

LOEB & LOEB LLP  
10100 Santa Monica Blvd. Suite 2200  
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247/PD-5385

Exp. Mail No. EM 377 155 497



SPECIFICATION

TITLE OF THE INVENTION

SAPPHIRE MONOCRYSTAL, SEMICONDUCTOR LASER DIODE USING THE  
SAME FOR SUBSTRATE, AND METHOD FOR MANUFACTURING THE SAME

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BACKGROUND OF THE INVENTION

APR 1 4 1969

1. Field of the Invention

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The present invention relates to a sapphire monocrystal provided with a smooth cleavage plane, more particularly, to a monocrystal sapphire substrate easier to cleave, so as to be used as a substrate, of thin film growth, such as semiconductor or the like, for electronic parts or structure parts, and to a method of working the same. Furthermore, the invention relates to a semiconductor laser diode using such a monocrystal sapphire substrate and a method of manufacturing the same.

2. Prior Art

The sapphire monocrystal, i.e.,  $Al_2O_3$ , is used for usage of wider range, because it has higher clear-degree, hardness and comparatively smoother plane. The sapphire of the monocrystal is pulled, growing a seed crystal in contact with the surface of the molten alumina to produce